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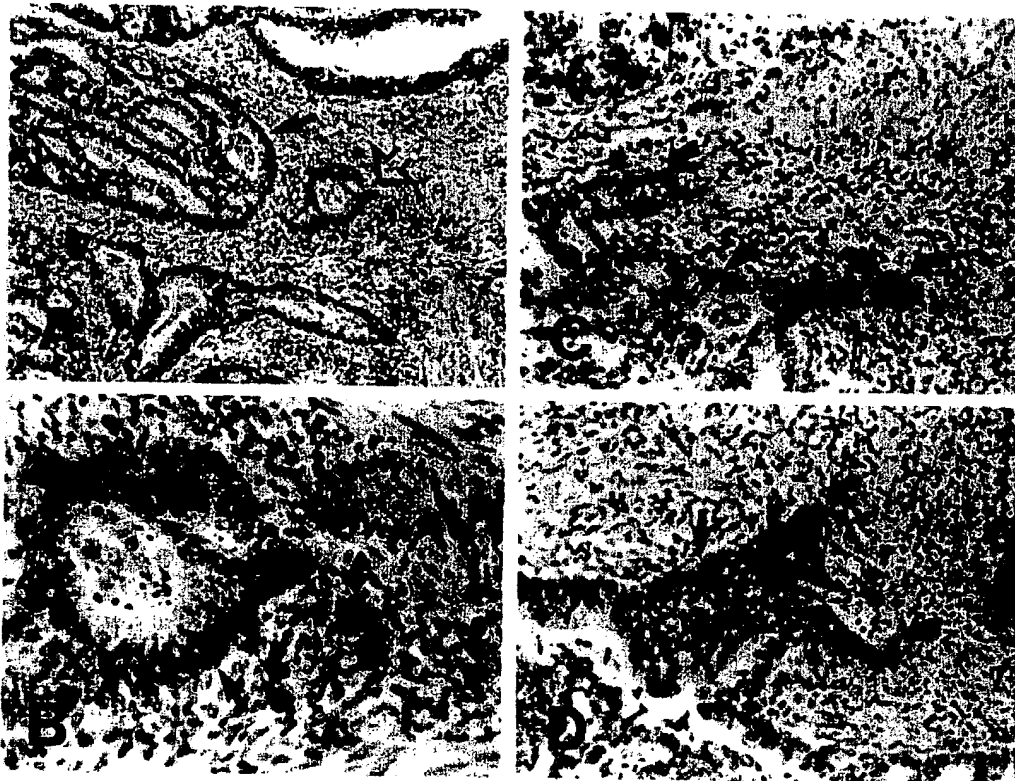
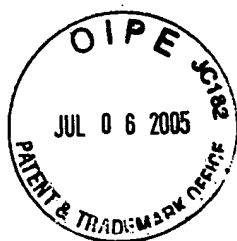


FIGURE 1



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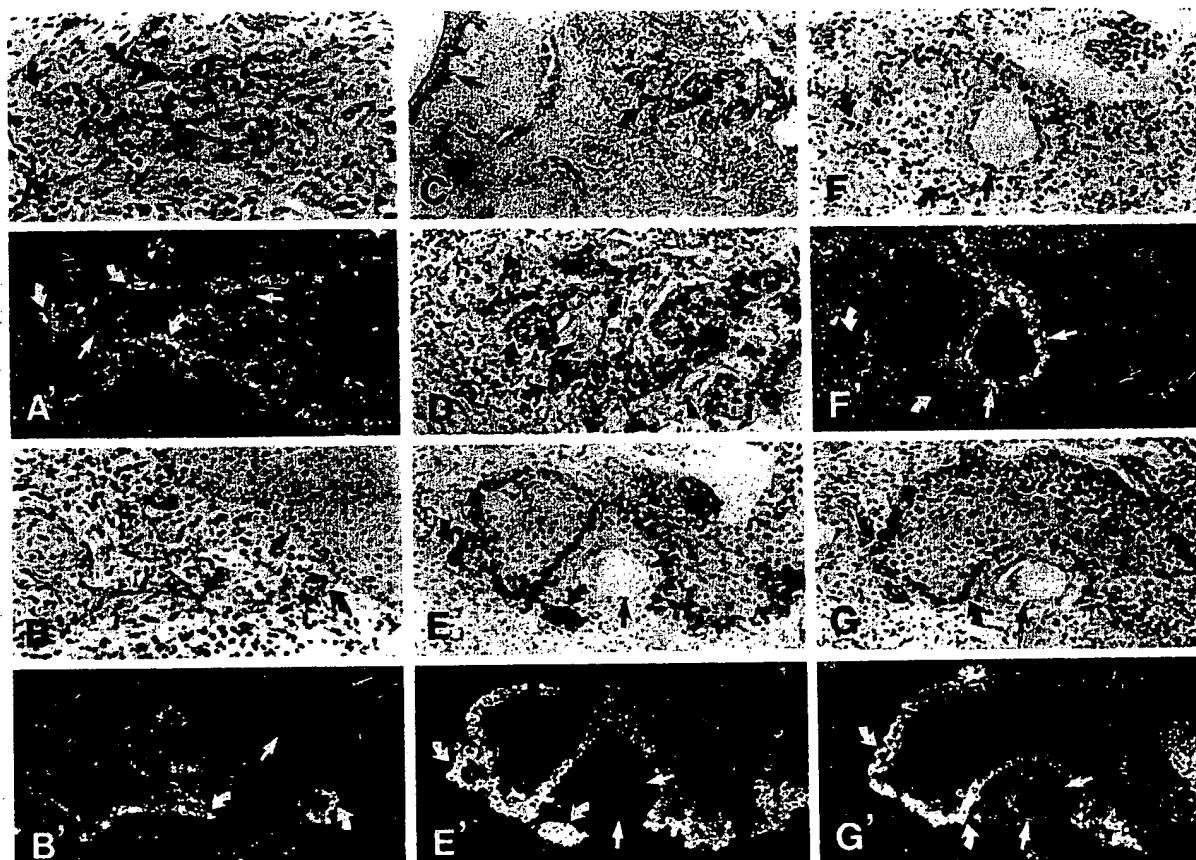
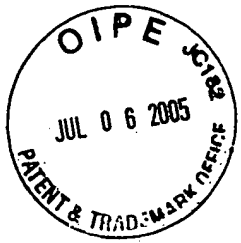


FIGURE 2



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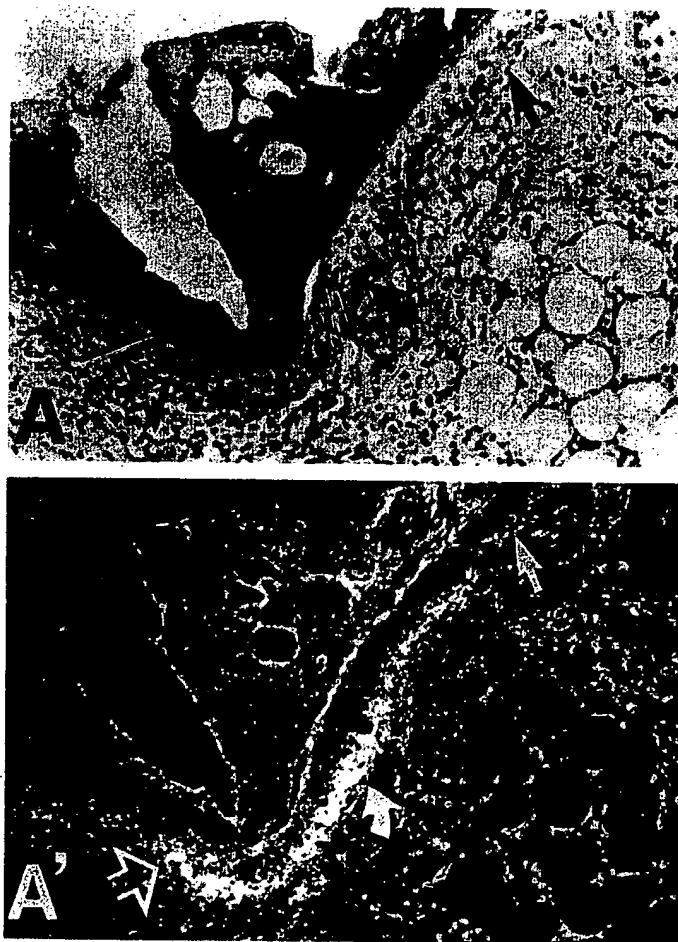


FIGURE 3

FIG 4A

1 gaccacctga tcgaaggaaa aggaagggcac agcggagcgc agagtggaaa ccaccaaccc
61 aggcgcccgg cagcgacccc tgcagcggag acagagactg agcggccccg caccgccatg
1 cctgcgctct ggctggggtg ctgcctctgc ttctgcgtcc tcttgcccgc agccccggcc
2 P A L W L G C C L C F S L L L P A A R A
181 acctccagga gggaagtctg tgattgcaat gggaagtcca ggcaagtgtat cttt gatcgg
22 T S R R E V C D C N G K S R Q C I F D R

⇒ Domain V

241 gaacttcaca gaaaaactgg taatggattc cgctgcctca actgcaatga caacactgat
42 E L H R Q T G N G F R C L N C N D N T D
301 ggcatctact gcgagaagtg caagaatggc ttttaccggc acagagaaag ggaccgctgt
62 G I H C E K C K N G F Y R H R E R D R C
361 ttgcccgtga attgtaactc caaagggtct cttagtgtc gatgtgacaa ctctggacgg
82 L P C N C N S K G S L S A R C D N S G R
421 tgcagctgta aaccaggtgt gacaggagcc agatgcgacc gatgtctgcc aggcctccac
102 C S C K P G V T G A R C D R C L P G F H
481 atgctcacgg atcggggggtg ccccaaagac cagagactgc tagactccaa gtgtgactgt
122 M L T D A G C T Q D Q R L L D S K C D C
541 gaccagactg gcatcgtagg gccctgtgac gcggggcgct gtgtctgcaa gccagctgtt
142 D P A G I A G P C D A G R C V C K P A V
601 actggagAAC cgtgtgatag gtgtcgatca ggtactata atctggatgg ggggaacctt
162 T G E R C D R C R S G Y Y N L D G G N P
661 gagggctgta cccagtgttt ctgctatggg cattcagcca gctgccgcag ctctgcagaa
182 E G C T Q C F C Y G H S A S C R S S A E

⇒ Domain IV

721 tacagtgtcc ataagatcac ctctaccttt catcaagatg ttgatggctg gaaggctgtc
202 Y S V H K I T S T F H Q D V D G W K A V
781 caacgaaatg ggtctcctgc aaagctccaa tggtcacagc gccatcaaga tgtgtttagc
222 Q R N G S P A K L Q W S Q R H Q D V F S
841 tcagcccaac gactagatat tgtctatttt gtggctcctg ccaaatctt tgggaatcaa
242 S A Q R L D P V Y F V A P A K F L G N Q
901 cagggtgagct atggggcaag cctgtccttt gactaccgtg tggacagagg aggcagacac
262 Q V S Y G Q S L S F D Y R V D R G G R H
961 ccactctgcc atgatgtgat cctggaaggt gctgggtctac ggatcacagc tcccttgtat
282 P S A H D V I L E G A G L R I T A P L M
1021 ccacttggca agacactgcc ttgtgggttc accaagactt acacattcag gttaaatgag
302 P L G K C T L P C G L T K T Y T F R L N E
1081 catccaagca ataattggag cccccagctg agttactttg agtatcgaag gttactgcgg
322 H P S N N W S P Q L S Y F E Y R R L L R
1141 aatctcacag ccctccgcat ccgagctaca tatggagaat acagtactgg gtacattgac
342 N L T A L R I R A T Y G E Y S T G Y I D
1201 aatgtgaccc tgatttcage ccgccctgtc ttgggagccc cagcaccctg ggttgaaacg
362 N V T L I S A R P V S G A P A P W V E Q
1261 tgtatatgtc ctgttgggta caaggggcaa ttctgcccag atttgtcttc tggctacaag
382 C I C P V G Y K G Q F C Q D C A S G Y K

⇒ Domain III

1321 agagattcag cgagactggg gcccttttggc acctgtattc cttgttaactg tcaaggggga
402 R D S A R L G P F G T C I P C N C Q G G
1381 ggggcctgtg atccagacac aggagattgt tattcagggg atgagaatcc tgacattgag
422 G A C D P D T G D C Y S G D E N P D I E
1441 tgtgttgact gcccaattgg ttctacaac gatccgcagc acccccgcag ctgcaagcca
442 C A D C P I G F Y N D P H D P R S C K P
1501 tgtccctgtc ataacgggtt cagctgtcta gtgattccgg agacggggsa ggtgtgtgtc
462 C P C H N G F S C S V I P E T E E V V C

FIG 4B

(SEQ ID NO.:12 & 13)

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1561 aataactgcc ctccccgggt caccgggtgcc cgctgtgagc tctgtgctga tggctacctt
482 N N C P P G V T G A R C E L C A D G Y F
1621 ggggacctt ttgggaaca tggccagtg aggcctgtc agccctgtca atgcaacagc
502 G D P F G E H G P V R P C Q P C Q C N S
1681 aatgtggacc ccagtgcctc tgggaattgt gaccggctga caggcagggt tttgaagtgt
522 N V D P S A S G N C D R L T G R C L K C
1741 atccacaaca cagccggcat ctactgcgac cagtgcgaa caggctactt cggggaccca
542 I H N T A G I Y C D Q C K A G Y F G D P
1801 ttggctccca acccagcaga caagtgtcga gcttgcaact gtaaccccat gggctcagag
562 L A P N P A D K C R A C N C N P M G S E
1861 cctgtaggat gtggaagtga tggcacctgt gtttgcaagc caggatttgg tggccccaac
582 P V G C R S D G T C V C K P G F G G P N
1921 tgtgagcatg gagcattcag ctgtccagct tgctataatc aagtgaagat tcagatggat
602 C E H G A F S C P A C Y N Q V K I Q M D

      I-II Domain I/II
1981 cagtttatgc agcagcttca gagaatggag gccctgattt caaaggctca ggggtggat
622 Q F M Q Q L Q R M E A L I S K A Q G G D
2041 ggagtagtac ctgatacaga gctggaaggc aggatgcagc aggctgagca ggccttcag
642 G V V P D T E L E G R M Q Q A E Q A L Q
2101 gacattctga gagatgccc gatttcagaa ggtgctagca gatcccttgg tctccagttg
662 D I L R D A Q I S E G A S R S L G L Q L
2161 gccaaagtga ggagccaaga gaacagctac cagagccgcc tggatgacct caagatgact
682 A K V R S Q E N S Y Q S R L D D L K M T
2221 gtggaaagag ttccgggtctt ggggaagtcag taccagaacc gagttcggga tactcacagg
702 V E R V R A L G S Q Y Q N R V R D T H R
2281 ctcatcactc agatgcagct gagcctggca gaaagtgaag ctcccttggg aaacactaac
722 L I T Q M Q L S L A E S E A S L G N T N
2341 attcctgcct cagaccacta cgtggggcca aatggcttta aaagtctggc tcaggaggcc
742 I P A S D H Y V G P N G F K S L A Q E A
2401 acaagattag cagaaagcca cgttgagtc gccaagtaaca tggagcaact gacaaggaa
762 T R L A E S H V E S A S N M E Q L T R E
2461 actgaggact attccaaaca agccctctca ctggtgcgca aggcctgca tgaaggagtc
782 T E D Y S K Q A L S L V R K A L H E G V
2521 ggaagcggaa gcggtagccc ggacggtgct gtggtgcaag ggcttgtgga aaaattggag
802 G S G D G A V V Q G L V E K L E
2581 aaaaccaagt ccctggccca gcagttgaca agggaggcca ctcaagcggg aattgaagca
822 K T K S L A Q Q L T R E A T Q A E I E A
2641 gataggtctt atcagcacag tctccgcctc ctggattcag tgtctccgct tcaggaggctc
842 D R S Y Q H S L R L L D S V S P L Q G V
2701 agtgatcagt cctttcaggt ggaagaagca aagaggatca aacaaaaagc ggattcactc
862 S D Q S F Q V E E A K R I K Q K A D S L
2761 tcaagcctgg taaccaggca tatggatgag ttcaagcgtc cacaaaagaa tctgggaaac
882 S S L V T R H M D E F K R T Q K N L G N
2821 tggaaagaag aagcacagca gctcttacag aatggaaaaa gtgggagaga gaaatcagat
902 W K E E A Q Q L L Q N G K S G R E K S D
2881 cagctgcttt cccgtgccaa tcttgctaaa agcagagcac aagaagcact gagtatgggc
922 Q L L S R A N L A K S R A Q E A L S M G
2941 aatgccactt tttatgaagt tgagagcatt cttaaaaacc tcagagagtt tgacctgcag
942 N A T F Y E V E S I L K N L R E F D L Q
3001 gtggacaaca gaaaagcaga agctgaagaa gccatgaaga gactctccta catcagccag
962 V D N R K A E A E E A M K R L S Y I S Q
3061 aaggtttcag atgccagtga caagaccag caagcagaaa gagccctggg gagcgtgct
982 K V S D A S D K T Q Q A E R A L G S A A
3121 gctgatgcac agagggcaaa gaatggggcc ggggaggccc tggaaatctc cagtgaagatt
1002 A D A Q R A K N G A G E A L E I S S E I

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FIG 4C

(SEQ ID NO.: 12 & 13)

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3181 gaacaggaga ttgggagtct gaacttggaa gccaatgtga cagcagatgg agccttggcc
1022 E Q E I G S L N L E A N V T A D G A L A
3241 atggaaaagg gactggcctc tctgaagagt gagatgaggg aagtggagg agagctggaa
1042 M E K G L A S L K S E M R E V E G E L E
3301 aggaaggagc tggagtttga cagcaatag gatgcagtac agatgggtgat tacagaagcc
1062 R K E L E F D T N M D A V Q M V I T E A
3361 cagaaggttg ataccagagc caagaacgct ggggttacaa tccaagacac actcaacaca
1082 Q K V D T R A K N A G V T I Q D T L N T
3421 ttagacggcc tcttgcattc gatggaccag cctctcagtg tagatgaaga ggggctgggc
1102 L D G L L H L M D Q P L S V D E E G L V
3481 ttactggagc agaagcttcc ccgagccaag acccagatca acagccaact gcggcccatg
1122 L L E Q K L S R A K T Q I N S Q L R P M
3541 atgtcagagc tggaaagagag ggcacgtcag cagagggggc acctccattt gctggagaca
1142 M S E L E E R A R Q Q R G H L H L L E T
3601 agcatagatg ggattctggc tgatgtgaag aacttggaga acattaggga caacctgccc
1162 S I D G I L A D V K N L E N I R D N L P
3661 ccaggctgct acaataccca ggctcttgag caacagtga gctgccataa atatttctca
1182 P G C Y N T Q A L E Q Q *

3721 actgaggttc ttgggataca gatctcaggg ctggggagcc atgtcatgtg agtgggtggg
3781 atggggacat ttgaacatgt ttaatgggtg tgctcaggtc aactgacctg accccattcc
3841 tgatcccatg gccagggtgt tgccttattg caccatactc cttgcttctc gatgctgggc
3901 atgaggcaga taggcactgg tgtgagaatg atcaaggatc tggaccccaa agatagactg
3961 gatggaaaaga caaactgcac aggcagatgt ttgcctcata atagtctgaa gtggagtccct
4021 ggaatttggg caagtgtgtg tgggatatag tcaacttatt ctttgagtta tgtgactaaa
4081 ggaaaaaact ttgactttgc ccaggcatga aattcttcct aatgtcagaa cagagtgcac
4141 cccagtcaca ctgtggccag taaaatacta ttgcctcata ttgtcctctg caagcttctt
4201 gctgatcaga gtctctctta cttacaaccc aggggtgtgaa catgttctcc attttcaagc
4261 tggaaagaagt gagcagtgtt ggagtggagg cctgtaaggc aggccattc agagctatgg
4321 tgcttgctgg tgcttgccac cttcaagtcc tggacctggg catgacatcc tttcttttaa
4381 tgatgccatg gcaacttaga gattgcattt ttattaaagc atttccctacc agcaaagcaa
4441 atgttgggaa agtatttact ttttcgggtt caaagtgata gaaaagtgtg gcttgggcat
4501 tgaagagggt aaaattctct agatttatta gtcctaattc aatcctactt ttcgaacacc
4561 aaaaatgatg cgcatacatg tattttatct tattttctca atctcctctc tcttctctcc
4621 acccataata agagaatgtt cctactcaca cttcagctgg gtcacatcca tccctccatt
4681 catccttcca tccatcttcc catccattac ctccatccat ccttccaaca tatatttatt
4741 gagtacctac tgtgtgccag gggctgggtg gacagtgggt acatagtctc tgccctcata
4801 gagtgtgatt tctagttagg aagacaagca tttttaaaaa ataaatttaa acttacaac
4861 tttgtttgtc acaagtgggt tttattgcaa taaccgcttg gtttgcaacc tctttgtcca
4921 acagaacata tgttgcaaga cctcccatg ggcactgagt ttggcaagga tgacagagct
4981 ctgggttggt cacatttctt tgcattccag cgtcactctg tgccttctac aactgattgc
5041 aacagactgt tgagttatga taacaccagt ggggaattgt ggaggaacca gaggcacttc
5101 caccttggct gggaagacta tgggtgtgcc ttgcttctgt atttcttgg attttctga
5161 aagtgttttt aaataaagaa caattgttag atgccaaaaa //

```



FIG 4D

(SEQ ID NO.: 14 & 15)

3421 ttagacggcc tcctgcatct gatgggtatg tgaaccacac acccacaacc ttccagctcc
1102 L D G L L H L M G M *

3481 atgctccagg gctttgctcc agaacactca ctatacctag ccccgacaaa ggggagtctc
3541 agctttccctt aaggatatca gtaaattgtc tttgtttcca ggcccagata actttcggca
3601 ggttccctta catttactgg accctgtttt accgttgcta agatgggtca ctgaacacct
3661 attgcacttg ggggtaaagg tctgtggggc aaagaacagg tgtatataag caacttcaca
3721 gaacacgaga cagcttggga atcctgctaa agagtctggc ctggaccctg agaagccagt
3781 ggacagtttt aagcagagga ataacatcac cactgtatat ttcagaaaga tcaactagggc
3841 agccgagtgg aggaaagctt gaagaggggg ttagagagaa ggcagggtga gactacttaa
3901 gatattgttg aaataattga agagagaaat gacaggagcc tgctctaagg cagtagaatg
3961 gtggctggga agatgtgaag gaagattttc ccagtctgtg aagtcaagaa tcacttgccg
4021 gccgggtgtg gtggctcacg cctgtaattc tagcactttg ggagactgaa gcgggtggat
4081 cacccgaggt caggagtga agaccagcct ggccaacatg gtgaaaccct gtctctacta
4141 aaagtacaaa aattagctgg atgatggtgg tgggcgcctg taattccagc tactcaggag
4201 tctgaggcag gagaatcgct tgaaccagc aggcgaggtt acagtgaacc aagattgcac
4261 cactgctctt ccagcctggg aacagagaga ctgcctaataa aaaaaaaaaa aaaaaa //

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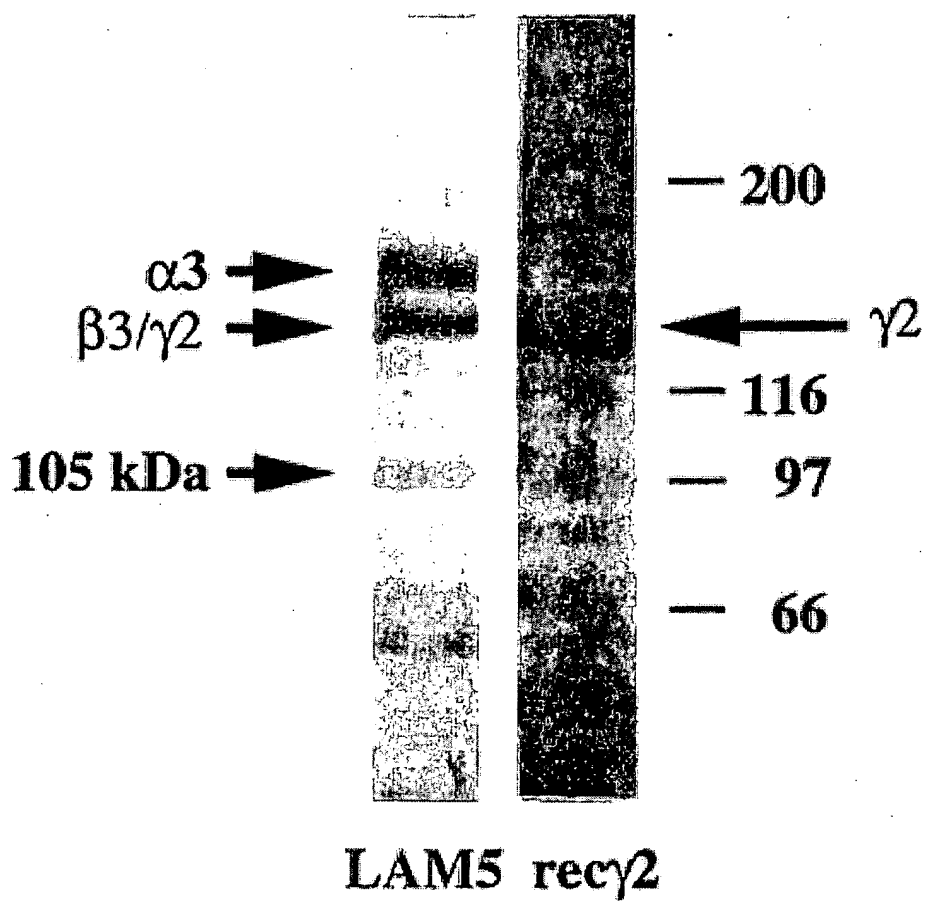


FIGURE 5

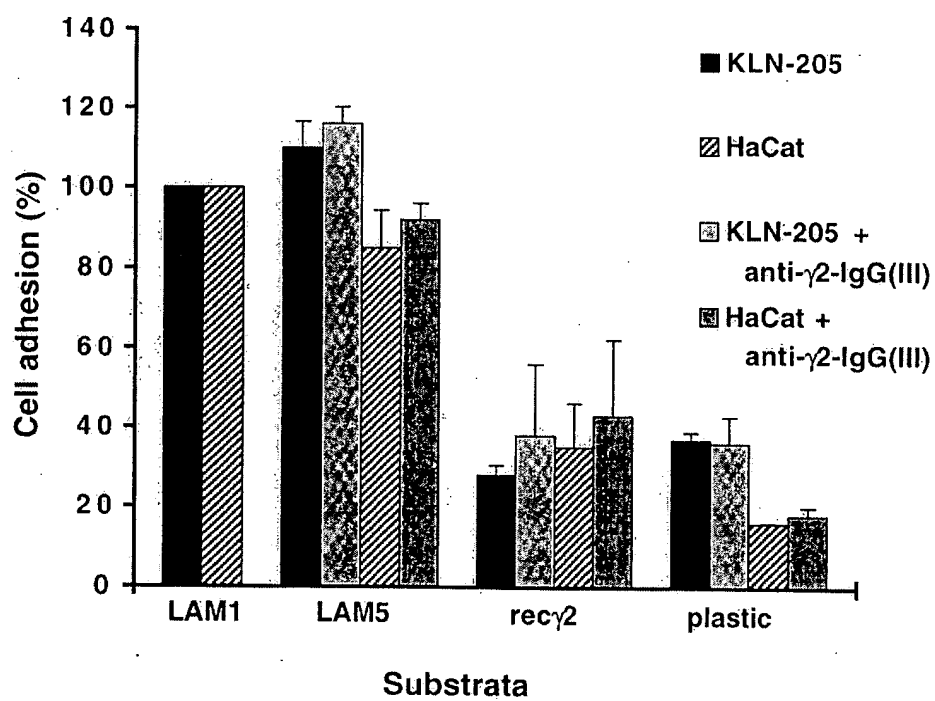


FIGURE 6

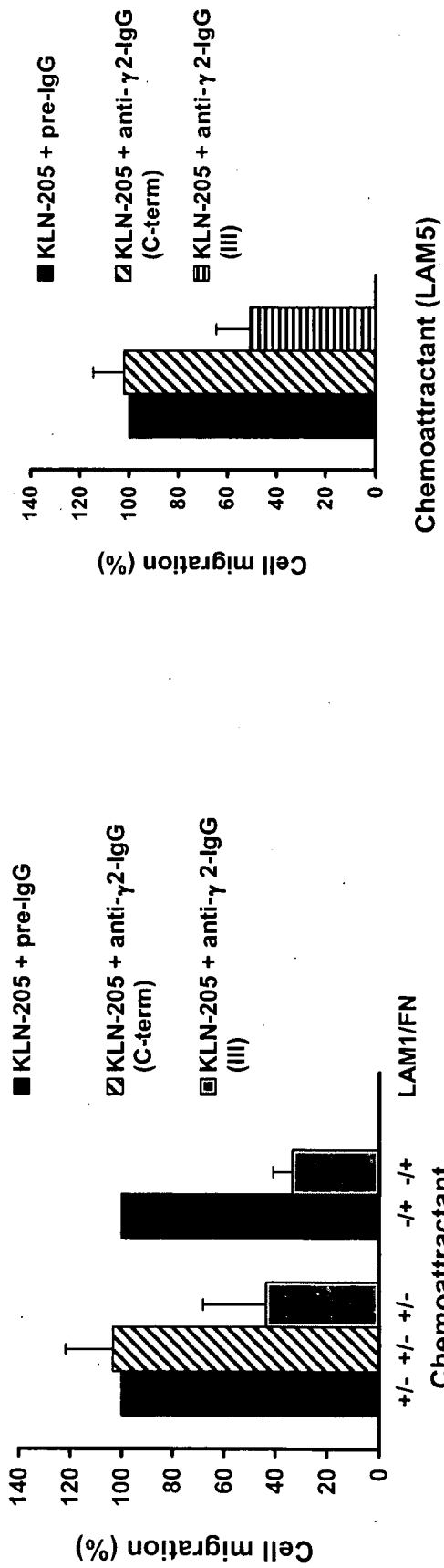


FIGURE 7

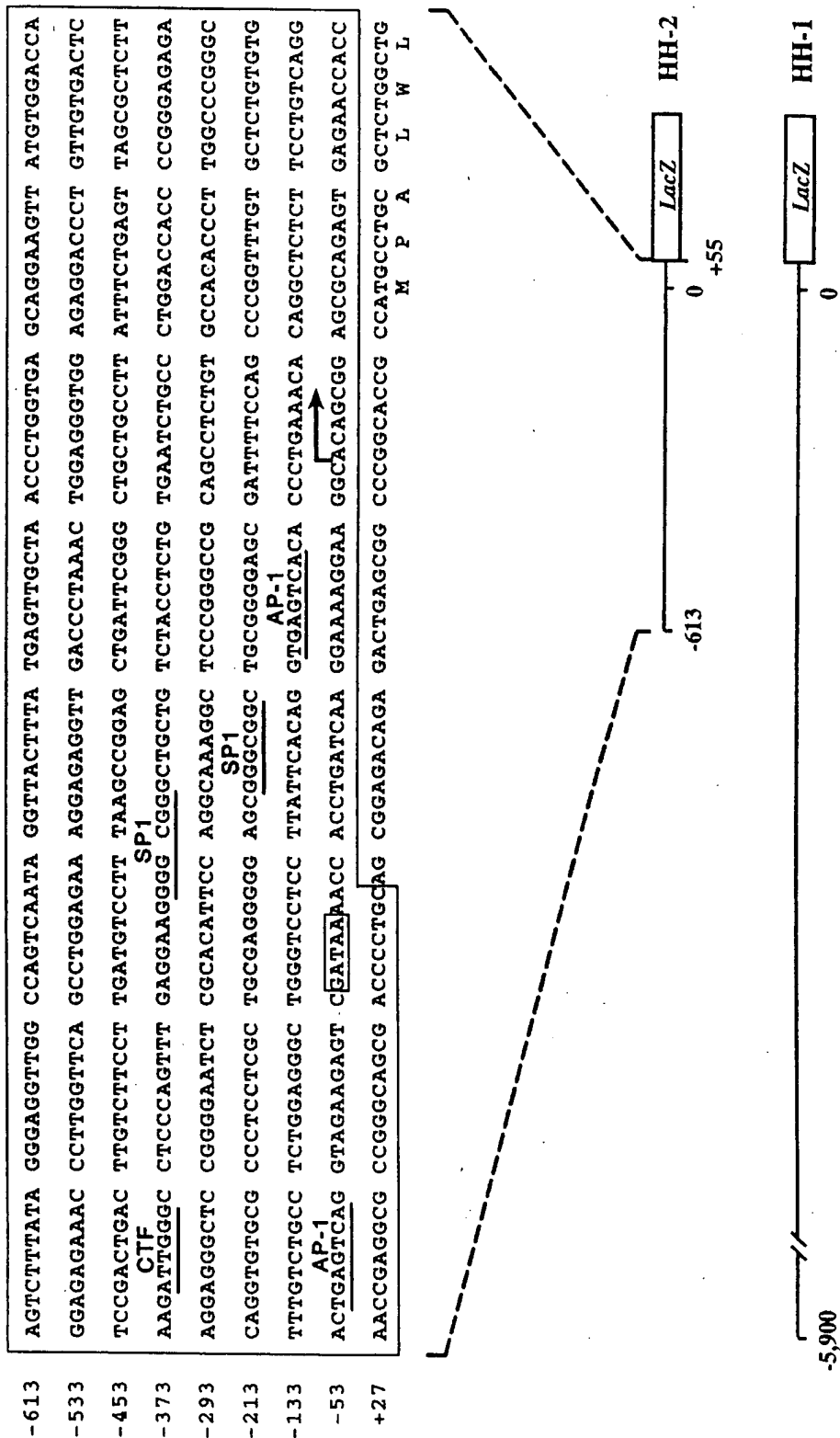


FIGURE 8

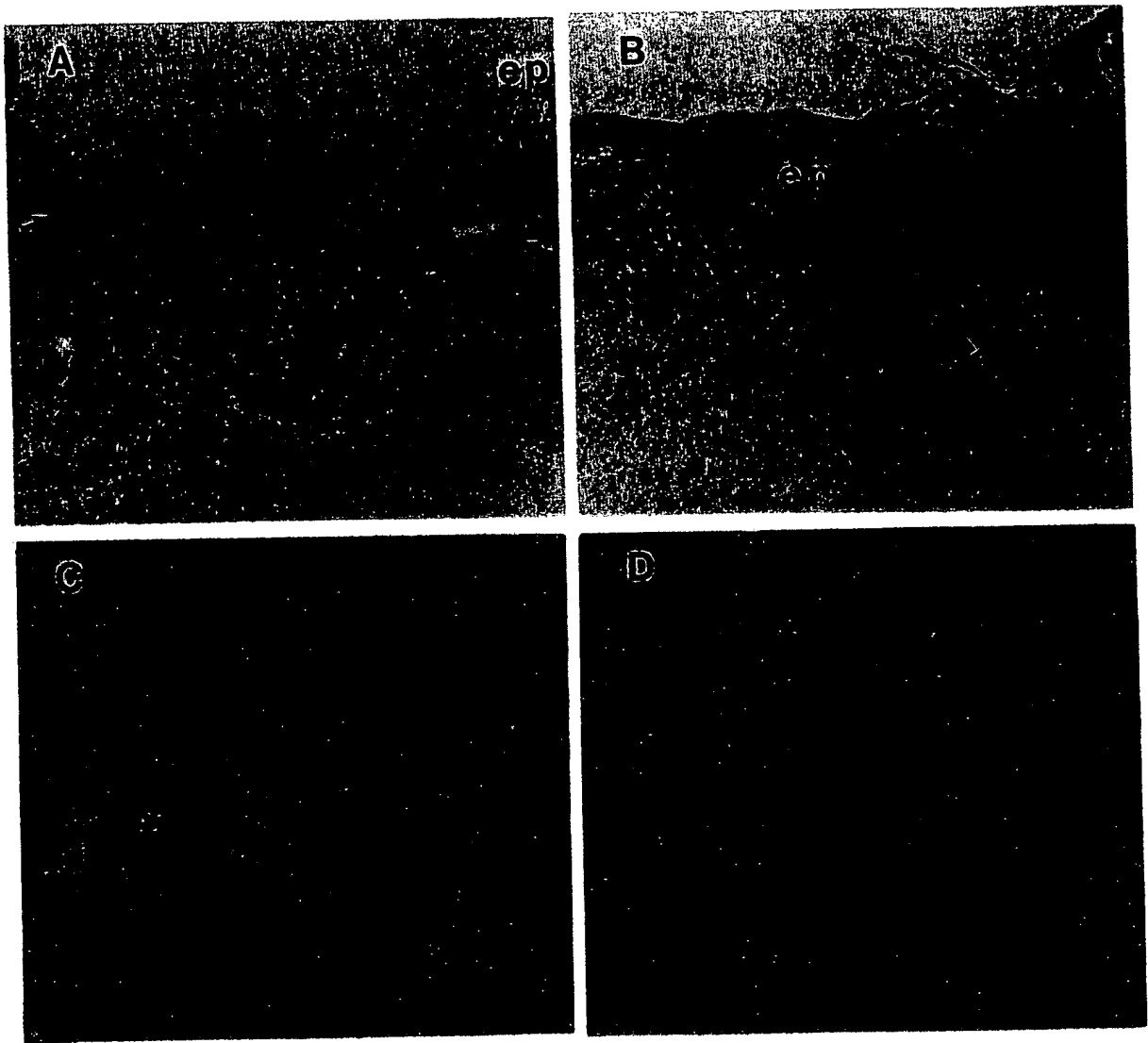
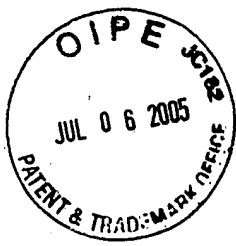
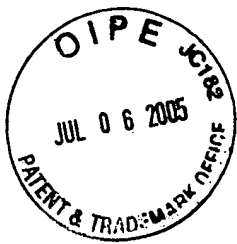


FIGURE 11

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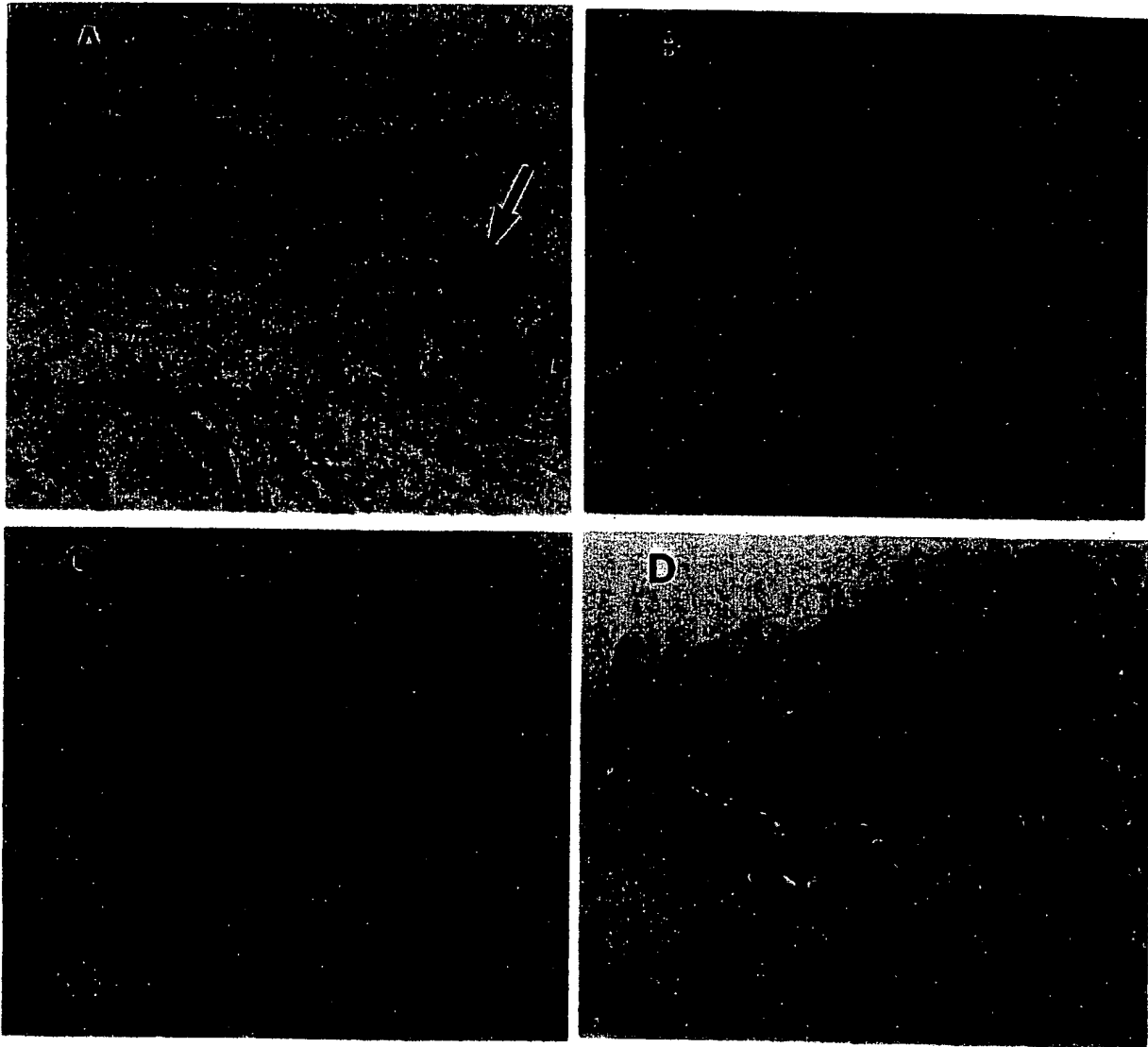


FIGURE 10



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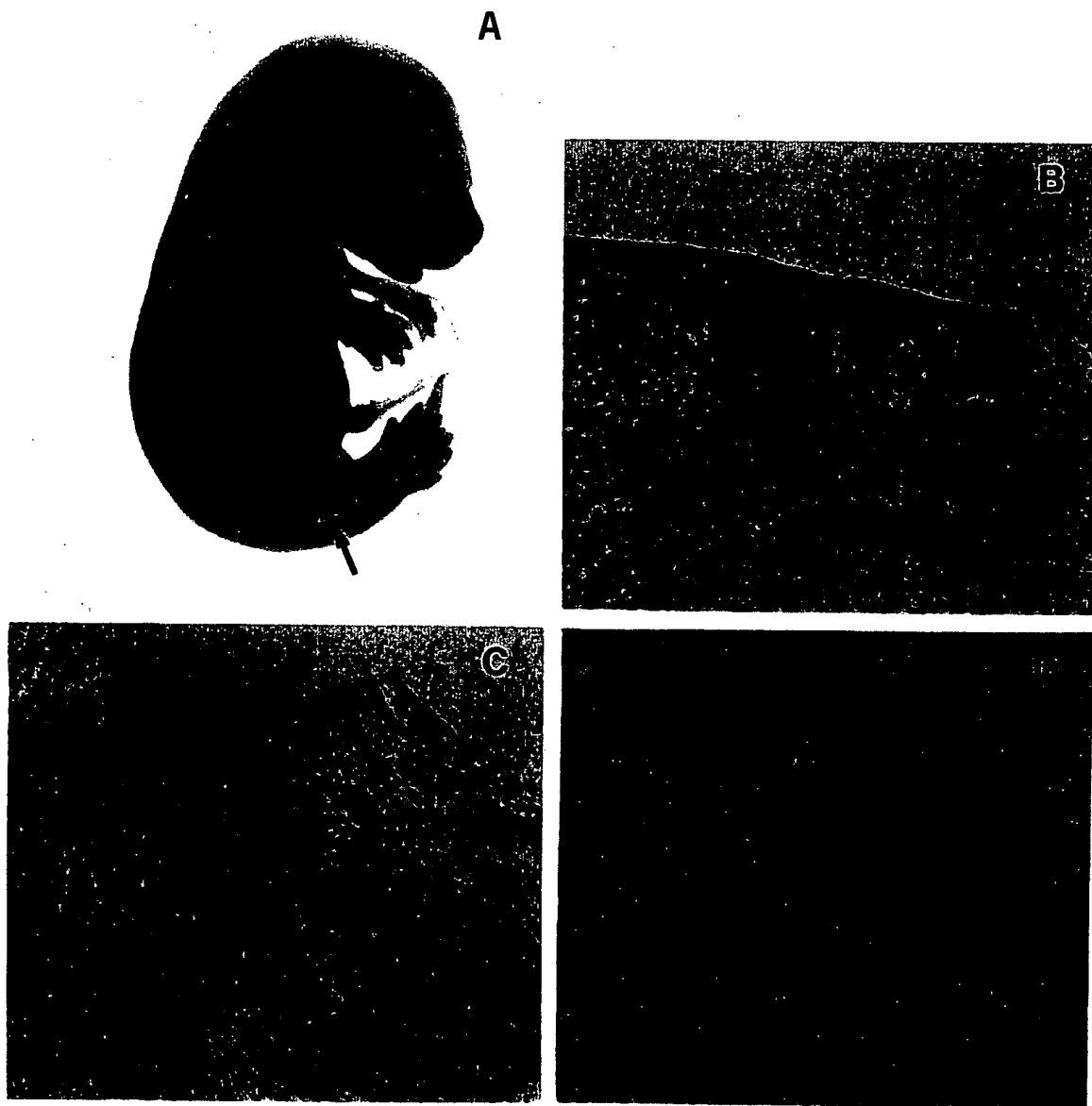


FIGURE 9